



DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
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IN REPLY REFER TO

NAVAIRINST 13630.2C
PMA260
27 Nov 96

NAVAIR INSTRUCTION 13630.2C

From: Commander, Naval Air Systems Command

Subj: INTRODUCING THE CONSOLIDATED AUTOMATED SUPPORT SYSTEM TO
NAVAL AVIATION MAINTENANCE

Ref: (a) SECNAVINST 3960.6, "Department of the Navy Policy and Responsibility
for Test, Measurement, Monitoring, Diagnostic Equipment and Systems,
and Metrology and Calibration (METCAL)", 1990
(b) DoD 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs
and Major Automated Information Systems", 1996

Encl: (1) Consolidated Automated Support System (CASS) Introduction Process
(2) Consolidated Automated Support System (CASS) Waiver Request Format
(3) Consolidated Automated Support System (CASS) Waiver Coordination Sheet
(4) Test Program Set (TPS) Assessment Team Procurement Checklist
(5) TPS Assessment Team Fielding Checklist

1. Purpose. To establish policy, assign responsibilities, and provide procedures for optimizing the use of the Consolidated Automated Support System (CASS) and its associated Test Program Sets (TPSs) by the Naval Aviation Systems Team (TEAM) within the naval aviation maintenance process.

2. Cancellation. This instruction supersedes NAVAIR Instruction 13630.2B of 26 April 1994. Since this is a major revision, changes are not indicated.

3. Discussion. CASS was developed to provide an all Navy, multifunction, standardized Automatic Test Equipment (ATE) system designed to serve as the sole Automatic Test System (ATS) family for the Navy. CASS comprises many commercial components and has a flexible architecture that can be expanded to respond to test requirements of emerging technologies. Reference (a) establishes CASS as the standard Navy automatic electronic test system. Reference (b) requires that DoD ATS families or commercial off-the-shelf (COTS) components that meet defined ATS capabilities shall be used to meet all acquisition needs for ATE hardware and software. Enclosure (1) delineates the process for introducing and optimizing the use of CASS in naval aviation maintenance.



4. Policy. The Commander, Naval Air Systems Command and Aviation Program Executive Officers policy is:

a. Electronic weapon systems/subsystems will be designed for ease of testing and compatibility with CASS.

b. CASS or CASS-compatible equipment is encouraged to be specified as the factory test equipment required at a development/manufacturing facility. CASS-compatible equipment is defined as ATE that can support the operation of TPSs developed on the Navy's CASS (i.e., TPSs must be transportable without modification between the "CASS Compatible" equipment and CASS itself.)

c. CASS will be used to satisfy all Navy organic intermediate and depot level ATE requirements.

d. Waiver approval is required when CASS is determined not to be the optimum Navy ATE support solution.

5. CASS Introduction. The general strategy for introducing and optimizing the use of CASS in the naval aviation maintenance environment is to:

a. Target the development and design of new electronic weapon systems/subsystems for ATE support through the use of CASS.

b. Perform a Cost and Benefit Analysis (C/BA) to verify whether CASS is the best support solution in the acquisition of new electronic weapon systems/subsystems. If the C/BA indicates that CASS is not the optimum ATS solution, a CASS waiver will be required.

c. Focus initially on the ATS requirements for intermediate level maintenance aboard aircraft carriers. To ensure that adequate space is available on board ship for CASS, avionics currently being tested on older ATE will be off-loaded to CASS based on fleet requirements, a C/BA, and the availability of funds. Generally, existing ATE that is approaching the end of its useful life will be replaced with CASS on a priority basis, whereas, the more recently deployed ATE will remain in service until it is economically feasible to replace it with CASS.

d. Assess major modifications to existing electronic weapon systems/subsystems and supporting ATE for CASS application by using the preceding strategy.

6. CASS Waiver Requests. Reference (a) requires Assistant Secretary of Navy (ASN)(RD&A) approval of all Navy CASS waiver requests. Navy CASS waiver requests (enclosure (2)), in response to reference (a) will be based on, and traceable to, specific factors such as: Life Cycle

Cost (LCC) comparisons resulting from a C/BA; weapon system/subsystem program deployment/activation schedules; the need for support technologies that are not within the CASS capability; or required test capabilities that are not currently available within CASS. All requests for a waiver from the policy established in paragraph 4 of this instruction will be prepared and coordinated with the cognizant organizations as outlined in enclosure (3).

7. Responsibilities

a. Aviation Support Equipment Program Manager (PMA260), serving as the CASS Program Manager, is responsible for:

- (1) design, development, testing, and production of CASS stations;
- (2) acquisition of CASS stations, self-test TPSs, and other support of support equipment items;
- (3) coordination of CASS station deliveries and installations to satisfy fleet and program requirements;
- (4) ensuring that CASS is available and capable of supporting electronic weapon system/subsystem requirements at the Navy organic intermediate and depot level of maintenance;
- (5) budgeting, acquisition, and support of CASS to satisfy TEAM ATS requirements;
- (6) budgeting and acquisition of TPSs being used for existing ATE offload to CASS;
- (7) review of waivers for the acquisition and use of ATE other than CASS;
- (8) assessment of weapon system Integrated Program Team (IPT) TPS acquisitions prior to proposal initiation and prior to fielding to ensure compliance with CASS strategies. This PMA260 assessment will be available as a service to weapon system IPT's. Enclosures (4) and (5) represent sample check lists of those items to be reviewed as part of the PMA260 assessment; and
- (9) provide results of TPS acquisition assessments to weapon system program managers.

b. Program Managers/Weapon System IPT's will:

(1) perform C/BA of ATS requirements for new weapon systems/subsystems or major modifications to existing systems to verify CASS as the best support solution;

(2) coordinate the designation of weapon system/subsystem maintenance requirements with the cognizant weapon system/subsystem managers in the Logistics Management Department (AIR-3.1) and the Design Interface/Maintenance Planning/Engineering Technical Service Department (AIR-3.2);

(3) determine the specific CASS station configurations and quantities required to test each Unit Under Test (UUT) of the weapon system/subsystem under investigation;

(4) acquire the required TPS's for support of electronic systems utilizing CASS; and

(5) present CASS TPS acquisition status briefings that address enclosure (4) items to the CASS Program Office (PMA260) prior to TPS procurement initiation and again prior to fielding if a PMA260 assessment is desired.

c. Logistics Management Department (AIR-3.1) will assign an individual to serve as the Assistant Program Manager, Logistics (APM(L)) for CASS.

d. Weapon System/Subsystem APM(L)s will:

(1) coordinate with the cognizant engineering personnel within the IPT to optimize the use of internal and external testing of electronic UUTs;

(2) define maintenance concepts and testing requirements for avionic systems for which they are responsible;

(3) include CASS TPS acquisition requirements in applicable logistics requirements and funding summaries; and

(4) draft and coordinate inputs to the PMA260 CASS Introduction Plan (CIP).

8. Review. PMA260 shall review this instruction on an annual basis and provide recommendations for changes and deletions to the Commander.


J. A. LOCKARD

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**CONSOLIDATED AUTOMATED SUPPORT SYSTEM
(CASS) INTRODUCTION PROCESS**

1. The cognizant Program Manager, Air (PMA) office will perform an initial weapon system/subsystem Cost and Benefit Analysis (C/BA) to determine the feasibility of contractually requiring CASS for support of avionics systems. If the initial C/BA and maintenance concept so dictate, electronic system contracts will state that CASS is the target support solution for all electronic Units Under Test (UUT's) defined by the Logistic Support Analysis (LSA) as requiring Automatic Test Equipment (ATE) for intermediate or depot level maintenance testing.
2. Diagnostic requirements will be incorporated in system development specifications for new or modified weapon systems/subsystems. Diagnostic capability thresholds will be established in both the system specification and the system Test and Evaluation Master Plan. The objective of this effort is improved fleet supportability and Life Cycle Cost (LCC) through the optimized use of embedded and external test requirements. Therefore, as requirements for new or modified electronic weapon systems/subsystems arise, requirements will be incorporated into the development contract in order to optimize the system maintainability and CASS compatibility.
3. Those weapon system/electronic subsystem contracts requiring CASS as the target support solution will also be encouraged to require CASS or CASS-compatible equipment in the development/manufacturing facility. This action will enhance the vertical transportability of Test Program Sets (TPS's) from the factory floor to the maintenance facility and promote common testing at the factory, the depot, and intermediate levels of maintenance.
4. Upon the formal identification of a maintenance requirement via the LSA, the cognizant Integrated Program Team (IPT) Support Equipment project engineer will be tasked to run the CASS System Synthesis Model (SSM) to determine CASS configuration(s) which will satisfy the Automated Test System requirements. As the testing requirements become better defined, a final C/BA will be performed assessing the various support solutions in order to validate the CASS selection. Considerations will be given to LCC analysis, programmatic, technical, facility (space) considerations, and the reasonableness of the approach from a mission and common sense perspective. If the selected support solution is other than CASS, Navy and Department of Defense (DoD) waiver requests will be processed per paragraph 6 of the basic instruction.
5. At the request of weapon system IPT's, PMA260 will perform an assessment of CASS TPS acquisitions prior to the release of a Request for Proposal and prior to fielding of the TPS's for compliance with CASS strategies.

6. CASS station requirements will be entered into the CASS Introduction Plan (CIP) and will be satisfied by PMA260 for both TPS developmental and operational sites. Defense Business Operating Fund sites will provide funding to PMA260 for procurement of necessary stations.
7. The process of off-loading UUT's from existing ATE is to be conducted in parallel with the process for identifying CASS support requirements for new and modified emerging electronic systems. This "Off-Load Program" will be managed by PMA260 and is required to ensure that space will be available for CASS and to replace obsolete ATE.

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**CONSOLIDATED AUTOMATED SUPPORT SYSTEM (CASS)
WAIVER REQUEST**

Title: CASS Waiver for _____
(State the system(s) requiring support)

Background: (State the support requirement and the production status of the proposed CASS alternative.)

Problem/Issue: (State the reason/rationale for not proposing CASS.)

Discussion: (State economic, technical risk, programmatic, cost or other factors that would justify the consideration of a support solution other than CASS. The advantages and disadvantages of utilizing CASS alternatives must be clearly stated.)

Recommendations: (State the specific recommended support solution. Include the timeframe for transition to CASS support if the proposed support solution is for an interim period.)

PMAXXX
Program Manager, Air (PMA) Office
for appropriate Weapon System

Encl (2)

**CONSOLIDATED AUTOMATED SUPPORT SYSTEM (CASS)
WAIVER COORDINATION SHEET**

	<u>CONCUR</u>	<u>DATE</u>
ORIGINATOR: _____		
NAWCAD (4.8) Head, Support Equipment Engineering	_____	_____
AIR-3.1 Head, Logistics Management Department	_____	_____
PMA260 Program Manager, Aviation Support Equipment Program Office	_____	_____
AIR-1.0, Deputy Commander for Acquisition and Operations (for NAVAIR Programs) or Program Executive Officer (PEO)	_____	_____
AIR-3.0 Assistant Commander for Logistics	_____	_____

**TEST PROGRAM SET (TPS)
ASSESSMENT TEAM
PROCUREMENT CHECKLIST**

1. Approved management plan:

a. Management plan shall identify responsibilities for management, engineering, logistics, procurement, and Test and Evaluation (T&E).

b. The plan shall be signed by the designated procurement activity, the designated government acceptance representative, the TPS acquisition manager, and the T&E representative.

2. Acquisition strategy determined:

a. Sole source/competition

b. Quantity being bought in what year.

3. Contract type determined:

a. Fixed price

b. Cost plus.

4. Acquisition plan or Justification and Authorization status.

5. Results of the Level of Repair Analysis (LORA) or requirements of the maintenance plan for the UUT's for which Operational TPSs (OTPSs) are being procured.

6. Source of the UUT's for OTPS integration determined.

7. UUT's maintenance during OTPS integration determined.

8. Special test considerations for the following determined:

a. Holding fixtures

b. Interface devices that require calibration

c. Forced air cooling

d. Liquid cooling.

9. Quantity and configuration of the CASS stations required for integration determined:
 - a. Is data in System Synthesis Model (SSM)?
 - b. Results of SSM
 - c. Define any known CASS incompatibilities.
10. Determine whether CASS stations are to be provided as Government Furnished Equipment (GFE), Contractor Furnished Equipment (CFE) or at a TPS Integration Facility (TIF).
11. Method of CASS maintenance selected for duration of contract determined:
 - a. GFE
 - b. TIF
 - c. CFE.
12. Strategy for funding implementations of System Problem Report determined.
13. Type and how UUT source data is being provided to the OTPS developer determined.
14. OTPS End-To-End test time required by contract.
15. Version of the TPS standard acquisition package determined.
16. Tailoring of the acquisition package delineated and compiled for review.
17. Funding profile required by fiscal year defined. Was Cost Model utilized?
18. Plan for lessons learned defined.
19. Plan for providing CASS Tracking System accounts and training.
20. Procurement Planning Conference.

Encl (4)

**TEST PROGRAM SET (TPS)
ASSESSMENT TEAM
FIELDING CHECKLIST**

1. List of approved waivers and deviations.
2. Summary of System Problem Reports submitted and responses.
3. First Article Test Report summary.
4. Final Technical Evaluation (TECHEVAL) summary.
5. Program Plan to incorporate TECHEVAL recommendations.

Encl (5)